

# TRANSFORMERLESS, LOAD ADAPTIVE SPEED CONTROLLER

## ABSTRACT OF THE DISCLOSURE

[00113] The invention in the simplest form is an improved variable speed engine/generator set with an integrated power conditioning system and control method, used to generate high quality AC power with optimum fuel efficiency and reduced emissions. The variable speed generator control scheme allows for load adaptive speed control of engine and generator field. The transformerless power inverter topology and control method provides the necessary output frequency, voltage and/or current waveform regulation, harmonic distortion rejection, and provides for single phase, or unbalanced loading.